

# Obtaining Case History of a Patient

Have you ever thought why a technician collects information from the patient before she/he meets an ophthalmologist?

## INTRODUCTION

The medical history or case (medical) history of a patient is the information gained by a physician by asking relevant questions. These questions are related to complaints explained by the patient himself/herself or/and by other people who can give suitable information. This helps the ophthalmologist to obtain useful information to formulate a diagnosis and provide medical care to the patient.

Comprehensive care requires the enquiry about the patient's problems. Major eye problems, such as errors of refraction, cataract, squint, glaucoma and diabetic retinopathy, injury needs to be diagnosed in the earliest stage for restoration of eyesight. Such kind of eye diseases can be detected timely and referred at an early stage.

The information obtained in this way, together with the physical examination, enables the physician and other health professionals to frame a diagnosis and treatment plan. The treatment plan may include investigations to confirm the diagnosis. In case the diagnosis is not confirmed, a provisional diagnosis is

formulated, and other possibilities (the differential diagnoses) may be added. The treatment plan may then include further investigations to verify the diagnosis.

Let us now discuss about various aspects to be considered while recording the medical history of a patient.

## **SESSION 1: RECORDING MEDICAL HISTORY OF A PATIENT**

In this session, you will learn about the procedure to record the ophthalmic and optometric history of a patient and also to explain the diagnosis determined by the ophthalmologist.

A practitioner interrogates the patient to obtain the following information related to the patient:

**(a) Identification and demographics:** It includes the name, address, occupation, age, sex, height, weight, marital status, contact number of the patient and the person accompanying.

**(b) Chief complaints (CC):** It includes the details of major health related problems and its duration (for example, eye pain, eye infection, etc.).

**(c) History of the present illness (HPI):** It includes the complaints, enumerated in the CC. It is also called 'History of presenting complaint' or HPC.

**(d) Past medical history (PMH):** It includes the details of major illnesses, any previous surgery or operations (sometimes distinguished as 'Past Surgical History' or PSH), any current ongoing illness (for example, diabetes).

**(e) Family diseases:** It includes details of family diseases, especially those that are relevant to the patient's chief complaint.

**(f) Social history:** It includes details of living arrangements, occupation, marital status, number of children, drug addiction (including tobacco, alcohol, etc.), recent foreign travel, and exposure to pet animals.

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**(g) History related to medications:** It includes information regarding those medicines prescribed by doctors or obtained over-the-counter.

**(h) Allergies:** It includes details about allergies to medications, food, cosmetics and other environmental factors.

**(i) Sexual history:** It includes details about obstetric or gynaecological history.

### Chronic effect

A change that occurs in the body over a relatively long time (weeks, months or years) following repeated exposure or a single overexposure to a substance.

It is generally said that the diagnosis is uncovered in the history of the patient. The basis of a correct history is the correspondence between the doctor and patient. However, to get an accurate, representing record of what is troublesome to the patient, and how it has developed, is not an easy task. The history is a sharing of experience between the patient and doctor. Frequently, the history alone does uncover a diagnosis. During the course of the history, you will gather information related to the patient's education and social background.

### Recording medical history

While asking questions to the patients, remember that the questions can be verbal or non-verbal. Therefore, your behaviour, your physical position and your body language should be such that the patient is comfortable to talk to you and clearly answers your questions. You should make a note of the symptoms as you go along, so that you become instrumental in getting the right diagnosis and treatment plan. Children vary widely in their ability to communicate. Have toys handy for the child and take notes throughout the consultation. Generally, relatives are there to help and support the patient. They are helpful sources of additional information.



## Types of patients

You may encounter various types of patients. They may be of the following types:

### Quiet or shy patients

It is difficult to get answers from such patients. You will receive only monosyllabic answers, which can be extracted by direct questioning.

#### Acute effect

A change that occurs in the body within a relatively short time (minutes, hours, days) after exposure to a substance.

#### Acute exposure

A single exposure to a hazardous agent.

### Overconfident patients

They will address or add lot of their anxiety by turning up with an armful of answers which you may not find very useful.

### Angry patients

Patients may get uneasy due to excessive delay in the waiting room, perceived medical failings or if they are not taken seriously. Such patients are difficult to handle and you need to first pacify them before you begin questioning.

### Returning patients

Such patients need endless reassurance. Obtain the history from their relatives or friends. Where you suspect that there is a mental health problem, try to corroborate the information you are obtaining. If the patient is violent or intoxicated, describe the situation you are in and document verbatim what is said.

## Overview of medical history

### Past medical history (PMH)

This should include the usual health questions, but the main emphasis should be on the conditions directly

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contributing to ocular problems, such as diabetes, hypertension, and coronary artery disease, etc.

### Past ocular history (POH)

This should include enquiring about past clinic visits and surgeries. Specifically enquire about cataract surgeries, eye trauma, eye infections and glaucoma. You can get the patient's ocular history by examining their eye treatment record and medicines used.

### Family history

Focus on the family history with regard to the occurrence of diabetes and glaucoma, error of refraction squint and blindness. Patients will often confuse glaucoma with cataract, so be sure to clarify the difference.

### Allergies

Make a note of all basic allergies and their reaction.

### Professional history

Know the professional background of the patient. Farmers, welders, blacksmith, factory workers, carpenters, etc., such patients are prone to have eye injuries.

### Medications

Find out what eye medication the patient has used, and why. Are they using a regular eye drop? Did they bring their drops with them? If your patient can not remember their medications, it often helps to ask about the cap colour of the bottle (for example, all dilating drops have red caps).

### History of present illness related to eyes

A detailed ocular history is essential for diagnosis. Specific history of the present illness reviews should include the following:

**Floaters and flashes of lights:** These are the classic symptoms of a retinal detachment and retinal tears and early cataract. Therefore, every patient should be asked about these symptoms.



**Transient vision loss:** Curtains of darkness might indicate an ischemic event or a retinal detachment.

**Blurry vision:** For assessing blurry vision, ask questions like—is the vision always blurry? Does it worsen when reading or watching TV? Is there a glare problem at night that might indicate cataract? History of coloured halos around a light bulb, suggestive of early glaucoma.

### Practical Exercise

Visit a nearby vision care clinic or centre. Try to ask questions to the patients having eye problems. Note down your observations.

### Check Your Progress

#### A. Fill in the blanks

1. The medical history or case history of a \_\_\_\_\_ is the information gained by a doctor/nurse/technician by asking specific questions, with the aim of obtaining information useful in providing medical care.
2. Chief complaints include the major \_\_\_\_\_ problem or concern and its time course (for example, eye pain, eye infection, etc.).
3. Past medical history includes major \_\_\_\_\_, any previous surgery or operations or any ongoing illness.
4. Past \_\_\_\_\_ history should include conditions directly contributing to ocular pathology, such as diabetes, hypertension, and coronary artery disease.
5. Ocular history should include enquiring about past clinic visits and \_\_\_\_\_.
6. Retinal examination is a prerequisite for all patients undergoing \_\_\_\_\_ surgery.

#### B. Short answer questions (30–40 words)

1. Enlist the questions asked by a practitioner to a patient.
2. Why is it important to know the history of a patient's illnesses?

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## SESSION 2: DOCUMENTING A PATIENT'S MEDICAL HISTORY

In this session, you will learn to identify the purpose behind documenting the patient's case history. You will also learn about the need of confidentiality as per the clinic or hospital.

The medical record is property of hospital and not of the patient, the clinical department or the attending doctor, the hospital is the custodian of the documents. The information contained in records are confidential and privileged and cannot be publicly, divulged without the consent of the patient except under the process of law. Information like date of admission, discharge, birth or death can only be furnished to friends or relatives.

A detailed medical history of the patient is recorded to rule out systemic problems, such as diabetes, heart disease, lung disease, bleeding disorders, renal dysfunction and any drug allergies, or check if there has been prolonged use of medication. If there is any positive finding, the patient should be evaluated with the help of a general physician.

### Pertinent ocular history (POH)

History of injury, inflammation, raised eye pressure or retinal diseases should be obtained as any of these, if present, can affect the visual prognosis of the person after surgery. Also along with the history of cataract surgery or any other surgery done the information about the operative and post-operative course of the eye operated should be obtained. If the person has had a corneal surgery, information about the type of procedure used is helpful in predicting the intraocular lens power. The history of long-term diseases affecting the retina must also be enquired about. This may get masked by the cataract and should be explained.

### Surgical history

History of any eye surgery includes dates of operations, operative reports, and details of the eye surgery.





## Obstetric history

The details of past obstetric history, including any complications and medication, history of allergies to any drug or cosmetic, is of value.

## Medications and medical allergies

The medical records may contain a summary of the patient's current and previous medications as well as any medical allergies.

## Ocular investigations

The following ocular investigations are performed as part of the pre-operative evaluation:

- Visual acuity of the patient is recorded.
- The eyelids and the tear drainage systems are examined for any infection. If infection is present, appropriate measures should be taken and eye surgery should be postponed till recovery.
- Examination of anterior segment with a slit-lamp, with special reference to maturity of the cataract.
- Retinal examination is a pre-requisite for all patients undergoing cataract surgery. If the fundus is not seen or if retinal function is found to be defective, the visual prognosis should be explained to the patient.
- An ultrasonography is done to assess the retina, when the cataract is not age-related.
- Intraocular pressure is recorded to rule out coexisting glaucoma.
- The power of the intraocular lens to be implanted should be measured.

## Confidentiality of the patient's medical history

Medical record is the property of hospital and not of the patient, the clinical department or the attending doctor. The hospital is the custodian of documents. The information contained in records is confidential and privileged which cannot be publically divulged without the consent of the patient under process of law. Information, such as date of admission,



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discharge, birth or death, can only be furnished to near and dear ones.

### Practical Exercise

Visit a nearby vision care clinic and observe how the vision technician or an ophthalmologist or any other staff member maintains the patient's case history and other documents. Write a report on your observation.

### Check Your Progress

#### A. Fill in the blanks

1. \_\_\_\_\_ acuity of the patient is recorded as a part of pre-operative evaluation.
2. Ultrasonography is done to assess the \_\_\_\_\_.
3. Intra-ocular pressure may be recorded to rule out \_\_\_\_\_.

#### B. Short answer questions (30–40 words)

1. What is the importance of knowing the medical history of a patient?
2. Describe the pre-operative ocular investigations.
3. Retinal examination is one of the necessary components of investigation before cataract operation. Why?

### SESSION 3: INTEGRATING MEDICAL HISTORY AND PHYSICAL EXAMINATION FOR TREATMENT PLANS

You have learnt to take down the medical history. You will learn about the method generally adopted to integrate medical history with physical investigation, to frame treatment plans and modalities.

#### Medical record and history

The terms medical record, health record, and medical chart are used to describe the systematic documentation of a patient's medical history. The



traditional medical record for in-patient care can include admission notes, on-service notes, progress notes, pre-operative notes, operative notes, post-operative notes, procedure notes, etc. The 'notes' entered by eyecare professionals order for treatment schedule, various tests, etc.

## Physical examination

This is the recording of the patient's vital signs and other health related parameters (Table 2.1). This includes the examination of the different systems of human body. Vision, pupil, and intra-ocular pressure and fundus exam are the vital signs to be examined. After a brief history, these are checked before dilating the pupils for internal examination of the eyes.

**Table 2.1 History and suggested examination of patients with different eye problems**

Eye problems	History and visual acuity
Red, painful eyes	Lids, lacrimal system, conjunctiva, cornea, pupils, anterior chamber and intraocular pressure, syringing of lacrimal sac.
Foreign body	Lids, conjunctiva and cornea. If anatomical examination of the eye is mandatory
Reduced vision	Cornea, anterior chamber and beyond, functional testing of visual field, pupils, optic nerve and macula
Double vision/orbital problems	Fundus, optic nerve function, extraocular muscle function and their balances.
Headache/neurological sounding problems in absence of red eye	Fundus, optic nerve, pupillary functions, blood pressure, full neurological examination, measure intra ocular pressure and status of spectacles.

As the drops dilating the pupil affect vision, pupil size, and potentially may elevate pressure of the eyes, therefore the following signs need to be checked:

## Transient vision loss

Curtains of darkness might indicate an ischemic event or a retinal detachment, therefore evaluate these symptoms in detail.

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### Blurry vision

The vision worsens when reading or watching television in a wrong posture (people blink less when watching television and develop dry eyes). A glare of light at night that might indicate cataracts or seeing halos around the light bulb is an alarming sign of risk in intra-ocular pressure.

### Red, painful eyes

It is a common complaint; therefore, be sure to ask about the nature of the pain (is this a scratchy pain, aching pain, or only pain with exposure to bright light). Is there any discharge?

### Chronic itching and tearing

Is it due to blepharitis or some allergy? Is it in both eyes or only in one eye?

### Headaches and scalp tenderness

Ask about other associated symptoms, like jaw stiffness, weight loss, and night sweats.

### Test results

This includes the results of testing, such as blood tests.

### Assessment and treatment plan

The assessment is a written summation of what are the most likely causes of the patient's current set of symptoms (see Fig. 2.1). The treatment plan is the road map that a patient will follow on his or her journey through treatment. Treatment planning is a never-ending part of therapeutic plans. It is to take into account all of the physical, emotional, and behavioural problems relevant to the patient's care, as well as the patient's strengths and weaknesses.



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Fig. 2.1: Assessment and Treatment Plan

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### Practical Exercises

1. Visit a nearby vision care clinic to observe the method of recording notes on eye examination, diagnosis, and management of eye ailments.
2. Make a chart of the history of a patient and suggested examination of a patient.

### Check Your Progress

#### A. Fill in the blanks

1. The treatment plan is the road map that a \_\_\_\_\_ will follow on his or her journey through the treatment.
2. Chronic itching in the eye may be due to \_\_\_\_\_ or \_\_\_\_\_.

#### B. Short answer questions (30–40 words)

1. What is the importance of 'notes' in medical records?
2. If anybody is suffering from headache, then what probable examination is to be suggested?

## SESSION 4: ASSESSING FUNCTIONALITY OF A PATIENT'S EYES

You will learn about how an ophthalmologist assesses the patient's health and determines the functionality of a patient's eyes.

The three vital signs that an ophthalmologist should observe are: vision, pupil reaction and pressure of eye; ocular movements and field of vision can be additional signs to examine before putting drops to dilute the pupils for fundus examination.

### Assessing functionality of eyes

There are various tests that are routinely performed in specialty units to assess the functionality of eyes, such as:

#### Visual field assessment

It is a method of measuring the entire span of vision, i.e., their central and peripheral (side) field of vision.



The charting of visual field is a subjective examination. Help the patient understand the test instructions to seek full cooperation. Visual field is used to detect signs of glaucoma, damage to the optic nerve or to the retina.

### Ultrasound scan

Eye and orbit ultrasound needs high-frequency sound waves to measure and produce detailed images of the eye and eye orbit. The orbit is the socket in skull that holds the eye. This test provides a much more detailed view of the inside of the eye than is possible during a routine eye examination. It is used to visualise the lens, vitreous and retina or any growth or tumour around the eye.

### Exophthalmometer

It is an instrument used for measuring the degree of forward displacement of the eye in a condition called exophthalmos. The device allows measurement of the forward displacement of eyeball beyond lateral orbital rim to the front in a condition named proptosis (for example, thyroid eye disease).

### Keratometry

It is a diagnostic instrument for measuring the curvature of the anterior surface of the cornea, particularly for assessing the extent and axis of astigmatism.

### Fluorescence Angiography

It is a medical procedure in which a fluorescent dye is injected into the bloodstream. The dye highlights the blood vessels in the retinal vessels of the eye so they can be photographed to plan the treatment. This test is often used to manage disorders of diabetic retinopathy and the presence of blood in vitreous part of the eye.

### Optical coherence tomography (OCT)

It is a non-invasive imaging test that uses light waves to take cross-section pictures of retina and optic nerve (the light-sensitive tissue lining at the back of the eye).

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In case of any eye problems in infants, they can be taken for their first eye check-up after the age of six months.

### Practical Exercise

Visit a vision care clinic or centre, and observe an ophthalmologist performing various tests for assessing the functionality of eyes. Write a report based on your observations.

### Check Your Progress

#### A. Fill in the blanks

1. The three vital signs that an ophthalmologist should observe are vision, pupil, and \_\_\_\_\_.
2. Keratometry is done to assess the curvature of the anterior surface of \_\_\_\_\_.
3. Optical Coherence Tomography is a non-invasive \_\_\_\_\_ test that uses light waves to take cross-section pictures of the retina and optic nerve.
4. Children should have their first \_\_\_\_\_ exam at the age of six months.

#### B. Short answer questions (30–40 words)

1. What is the importance of visual field assessment? Explain the process used to treat diabetic retinopathy.

